



HISTORICAL POLITICAL ECOLOGY

Historical Political Ecology: An Introduction

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Historical Political Ecology

When I began my dissertation fieldwork in northeastern Nicaragua a decade ago, the country was still recovering from civil war. Though indigenous and Creole leaders had ended formal hostilities with the Sandinista government by signing an Autonomy Agreement in 1987, the laws necessary to regulate autonomy were only signed in 2003.¹ Indigenous struggles for autonomy during and after the war sustained a cultural politics of identity that united territorial ambitions with ethnic rights. The relative success of indigenous activism in general, and Miskito Indian practices in particular, led many commentators to characterize Miskito politics as *the* constitutive element of their ethnic identity.² It is easy to see why. Miskito leaders had become very adept at articulating a history of territorial independence and indigenous “nationhood” that significantly contradicts regional histories.³ Official and scholarly histories generally portray the Miskito as little more than British stooges and, later, dupes of Moravian missionaries and North American capital—passive recipients of history rather than agents of change. For some writers, Miskito culture was noticeably characterized by the term “Anglo-affinity,” a sentiment used to help explain Miskito resistance to the Sandinistas.⁴

It was during this conjuncture of ethnic and post-war Nicaraguan politics that I naïvely sought to conduct a political ecology of indigenous forest use. Ostensibly, I set out to investigate how indigenous communities understood and used their forest resources, and to locate this knowledge-use axis in its historical context. I conducted my research widely but focused on a single Sumu-Miskito community of about 1,000 people. Here I implemented my cultural and political ecology training—I mapped swidden plots, I stalked hunters, I interviewed elders and women, I recorded oral histories of past forest economies, and I chatted up forest

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dynamics with villagers. More than anything else though, I listened to people connect their hopes and dreams for a better life to the region's larger struggles for political autonomy and ethnic rights—for control of what they saw as “their” natural resources. As it turned out, little of this research found its way into my dissertation, but it was an essential experience for the dissertation I did write.

My political ecology approach was problematic on at least two accounts. First, I assumed that I could put aside or otherwise separate an analysis of forest use and indigenous knowledge about forests from an indigenous cultural politics that circumscribed both. This assumption was flawed because what people told me reflected highly politicized conceptions of their rights to the resources we discussed. This was not necessarily the “political” dimension of political ecology that I had intended to investigate but, as I argue later, it needs to be analyzed nonetheless. My second, and related, problem began when I tried to place my field study in the “historical context” that I assumed was “out there” waiting for me. In fact, a multiplicity of potential historical contexts awaited me, and few of them supported what I was reconstructing from primary documents. Throughout the twentieth century, most field-based studies seeking a historical context in eastern Nicaragua have used secondary literature to support convictions derived through other means.⁵ Before the civil war of the 1980s, the historical literature on eastern Nicaragua or the Mosquitia was, for the most part, sparse and lent itself to multiple interpretations. In the context of a civil war fueled by the United States, interpretations of the past became important and part of the regional political ecology.

Geographer Bernard Nietschmann's high-profile dispute with the Sandinistas and the political left in the U.S. over the history of the Miskito Indians and their “homeland” is a well-known case in point. Nietschmann's pro-Miskito positions, as well as those of his pro-Sandinista detractors, both invoked a historical perspective to justify their reading of the present. Yet, as I maintain below, neither position was well supported by the historical record. Diametrically opposed, both historical narratives simplified lengthy and complex historical processes to support a political position, and both shaped and reflected ongoing regional political processes affecting society-nature relations and environmental change—a discursive-material process had been ongoing for centuries.⁶ The notion of an ongoing, contested past and its role in shaping human-environmental relations forces us to confront the problematic nature of a “historical context.”

The notion that the past and its uses form a slippery slope is, of course, not new. But it does problematize the method of acquisition of “a historical context” and its meaning for research in political ecology. Frequently called for, though rarely discussed, the phrase “historical context” (with its cousin “historical perspective”) is among the most ambiguous notions in geography in general and political ecology in particular. What does the phrase “historical context” actually mean for political ecologists? Does it

mean treating time as a scale that extends backward from the present to elicit a “chain of explanation” for environmental degradation as Piers Blaikie and Harold Brookfield suggested in their seminal book *Land Degradation and Society*?⁷ Does it mean locating the present in the past or, as Raymond Bryant puts it, developing “an appreciation of the historical dimension” of environmental conflict?⁸ Does it mean interrogating the “long-term capitalization of nature” as Richard Peet and Michael Watts proposed it should in their influential book *Liberation Ecologies*?⁹ Does it mean linking the “histories of environmental and agricultural change, property laws, and ideas of nature” in the “South” to developments in the “North” as Karl Zimmerer and Thomas Bassett highlight in their important new book?¹⁰ To the extent that political ecologists have addressed this question, they have done so differently.

Historical analysis has been central to political ecology since the emergence of the approach in geography in the 1970s and 1980s. Yet, to my knowledge, no explicit attempt has been made to problematize or elaborate upon the use, scope, or role of historical analysis within political ecology. This is not to say that numerous political ecology studies have not made excellent use of historical sources and analysis, but rather that a sustained discussion of a historical political ecology has been notably lacking. I had been thinking about this for some time when the editors of *Historical Geography* asked me if I would put together a special issue section on the topic. I have often thought that a collection of papers illustrating how political ecologists conceptualize the past and make use of historical sources could bring the concerns and approaches of political ecology to a wider audience. In this sense, the goal of the present collection is to establish a dialogue about the role of history in political ecology while introducing the concerns of political ecology to a historically minded readership.¹¹

At the risk of establishing a counterproductive boundary around a heterogeneous approach, I suggest that a historical political ecology can be characterized as a field-informed interpretation of society-nature relations in the past (e.g., material, ideological, legal, spiritual), how and why those relations have changed (or not changed) over time and space, and the significance of those interpretations for improving social justice and nature conservation today. This characterization attempts to identify what I see as two key aspects of a historical political ecology. The first is a field-informed perspective on the past and, more specifically, a field-informed re-interpretation of primary historical documents. By field-informed I mean a lengthy field immersion that includes ethnography, surveys, participant observation, mappings, and often biophysical research. The second is an explicit linkage between social justice and the management of natural resources, a broadly conceived “nature conservation” that takes into account the health and viability of the non-human world. I think most self-identifying political ecologists would agree that some degree of social justice is a necessary starting point for effective nature conserva-

tion.¹² Although any notion of “social justice” is historically contingent and culturally specific, it should include a respect for cultural difference, customary rights and ways of knowing the world, as well as an equitable mode of resource distribution, economic opportunity, and political representation. In my opinion, the belief that social justice mutually supports nature conservation serves to unite the varied political ecology approaches.

A historical political ecology shares an affinity with environmental history and historical geography, but its explicit attempt to view nature in light of social issues, and the political forces constraining them both, frequently sets it apart. A good deal of environmental history—particularly the North American variety—tends to examine the role of nature in human history and measures its own usefulness “by whether or not it contributes to the health and integrity of natural systems.”¹³ This, of course, is a broad generalization that does not apply to all environmental history.¹⁴ Meanwhile, historical political ecology does not fit comfortably as a subset of historical geography. A majority of historical geography does not *explicitly* seek to link its topics of inquiry to social or environmental issues in the present. This is changing and hopefully historical political ecologists and historical geographers will find more common ground in the future.

This introduction contains three sections. The first outlines the principal characteristics of a political ecology approach to understanding society-nature relations. In the second, I suggest four groups or clusters of historical political ecology—historical ecology, land-use/land-cover (landscape) change, colonial legacies/resource conflicts, and geohistorical revisionism—and how each tends to use historical analyses in their research. Each of the four contributions in this section—those by Susanna Hecht, Christian Brannstrom, Peter Walker, and Philip Crossley—are located and introduced within these research clusters respectively. The final section draws from my own research in eastern Nicaragua to raise questions about the role of historical narratives, past globalizations, the historical dimension of culture, and how these contribute to a historical political ecology.

Political Ecology

Political ecology seeks to understand how local resource use and perception are mediated by a combination of regional biophysical characteristics and processes, and the discursive-material manifestations of power that operate across geographic scales. With deep roots in critical scholarship in general and the disciplines of geography and anthropology in particular, political ecology represents a multidisciplinary research approach to society-nature relations. Despite a great deal of variation in its application, five key elements tend to characterize a political ecology approach in geography: (1) livelihood production and reproduction as the key investigative site; (2) the relationship among social, economic, and environmen-

tal change; (3) international, colonialist, state, and corporate intervention at the community level as well as the uneven consequences and responses (e.g., conflict over resource access, changing gender relations); (4) causes and consequences of social-environmental marginalization and its remediation; and (5) empirical field and historical research.¹⁵ Though political and other human-cultural ecology perspectives share many things in common, important differences revolve around the analysis of scale, culture, the state, and the role of biophysical processes. Still, Karl Butzer's observation that human-cultural ecologists are "firmly opposed to mindless modernization according to Western standards" suggests a common philosophical underpinning to the various social ecology approaches to human-environmental relations.¹⁶

Until recently political ecologists worked almost exclusively among peasant and indigenous communities in places where people have a strong material and cultural attachment to immediate natural resources that both sustain their livelihood and give it meaning. In practice, this has meant the "Third World" or the postcolonial South. Increasingly, political ecology research is carried out in urban and "First World" contexts.¹⁷ The substantial variation within the approach has led some geographers to worry that heterogeneity will turn political ecology into a meaningless catch-all phrase. Others highlight political ecology's diversity as a beneficial form of "productive tension."¹⁸ While both of these positions possess solid arguments in their favor, I suggest that shoring up a more concerted use of history throughout political ecology could erode fears of irrelevancy without dampening the benefits derived through creative differences.

Debating the aims, methods, and characteristics of political ecology has become a topic in its own right. Political ecologists are thus not immune from the cyclical identity crises that characterize the discipline of geography as a whole. The perennial tension in political ecology seems to be the relative weight of the two terms—political and ecology. Does political ecology focus on politicized environments or does it examine how ecology and biophysical processes affect human use of natural resources, shaping political processes in turn? Andrew Vayda and Bradley Walters, for example, have argued that current political ecology deductively privileges political explanations of resource use and environmental change. By neglecting environmental characteristics and ecological processes, and by leaping to assumptions, they argue that the approach should be termed political geography, environmental politics, or political science.¹⁹ A similar criticism has been leveled by Zimmerer and Bassett, who seek to distinguish their "geographical political ecology" approach from the "environmental politics" or "politicized environment" approaches that they see as dominating "current political ecology textbooks." For Zimmerer and Bassett, the environment is not simply a stage upon which struggles over resource access take place, "rather biophysical processes, or nature, play an active role in shaping human-environmental dynamics." They argue

that the renewed focus on “nature’s agency” in political ecology signals a “natural turn” in the social sciences.²⁰ Brannstrom’s article in the current collection confirms this observation by detecting a return to a quasi-environmental determinism in political ecology and environmental history more generally. Though commonly cited as privileging politics, even Peet and Watts have highlighted the role of the environment as “an active constituent of [the human] imagination.”²¹

The origins of political ecology as a distinctive, if not cohesive, research approach in the 1970s and 1980s have been discussed elsewhere and need only be summarized here.²² Political ecology emerged as a reaction to the real and perceived limitations of behaviorist and functional understandings of human-environmental relations and processes. Geographers and others heaped sustained critiques upon work in environmental perceptions (or hazards) research, overly ambitious cybernetic-informational and ecological feedback theories of human behavior, and the tendency of ecological anthropology and human-cultural ecology to focus on the adaptive dynamics of groups already deemed to be adapted.²³ These critiques emerged in the wake of the Malthusian specter of an impending environmental crisis characterized by the 1968 publication of Paul Ehrlich’s *The Population Bomb* and Garrett Hardin’s “The Tragedy of the Commons,” among other reductionist and ahistorical works.²⁴ These alarmist and universalist approaches to human behavior arose in conjunction with a renewed discourse of development that saw “Third World” backwardness as a problem amenable to technical solutions, and hence in need of global intervention. Set in the context of the Cold War, Third World “development” also became an important dimension of U.S. national security. Not surprisingly, budding political ecologists working in the same places targeted for “development” often found that state and multilateral intervention increased both environmental degradation and social conflict.

Explaining environmental degradation became the principal goal of an emerging political ecology in the 1980s. Early work by Hecht and others, for example, demonstrated that land degradation in Amazonia was the logical result of a political-economic process that viewed land as a commodity rather than for its long-term health or productivity.²⁵ Simultaneously, Watts and others combined a Marxist political economy approach to Third World peasant studies to reconsider the social and environmental outcome of economic marginalization. Watts’ work pushed human-cultural ecology perspectives to consider labor and the social relations of production as the constituting elements of society-nature relations.²⁶ Also employing a political economy approach to human-environmental relations, Blaikie, and later, Blaikie and Brookfield, concentrated less on the social relations of production and focused more on land-user decision-making. Their work sought to develop a cross-cultural theory that outlined the linkages among economic change, marginalization, land

use, and environmental degradation. Their definition of political ecology as a combination of the “concerns of ecology and a broadly defined political economy” continues to be the standard.²⁷

The explicit attempt to influence wider policy affecting the nature and meaning of development and environmental degradation located political ecology in the larger debates and forces that helped produce the United Nations-sponsored Brundtland Commission’s report *Our Common Future* in 1987. Though strongly criticized today for its continued rhetoric of modernization and global intervention, the report was among the first international statements of its kind to link contemporaneous development policies to a concern for environmental quality.²⁸ Scholarly activism, regional protests, and the legitimacy of the report combined to ensure that social and environmental procedures became integral to development activities.²⁹ Though the “industry of development” remains deeply problematic and continues to be a central target of political ecology research, many of the beneficial changes in global environmentalism since the 1970s owe their origin to the application of the political ecology approach to society-nature relations.

As global intervention changed from “development” in the 1970s and 1980s to one of “sustainable development,” “environmental conservation,” and “biodiversity preservation” in the post-Cold War 1990s, the various political ecology approaches also changed. In particular, political economy perspectives are now routinely combined with historical and poststructuralist critiques of power-laden discursive formations that justify resource control. As truth-narratives, environmental discourses reveal positioned-conceptual understandings of nature, culture, and landscape, and are thus deeply implicated in affecting the processes they seek to describe. Though explaining environmental degradation or landscape change remains important, elucidating how human-environmental discourses serve to justify an erosion of customary rights to natural resources has become an important focus in political ecology.

Historical Analysis in Political Ecology

Historical analysis is central to the political ecology approach, yet methods and objectives vary. To discuss different uses of historical analysis in political ecology, I have grouped the variations into four research clusters—historical ecology, land-use/land-cover (landscape) change, colonial legacies/resource conflicts, and geohistorical revisionism. While these constellations of research interact in practice, grouping them allows me to identify some key traditions, concerns, and methodologies, as well as predominant cross-disciplinary links, and pronounced regional variations.

Historical ecology is an attempt to span the artificial dichotomy separating culture from nature, humanized landscapes from natural landscapes. Spanning a wide variety of disciplines, historical ecologists argue that “natu-

ral environments” have long been subjected to progressive human management and, in effect, become landscape: “culturally and historically determined physical environments.”³⁰ While methods and terminology vary, historical ecologists are united by their use of fieldwork to identify contemporary human-cultural ecology relationships, archaeological and earth-science techniques to reconstruct historical environments, wide use of ethnohistorical sources, and their combination to hypothesize past human-cultural ecologies. Research in the Amazon basin, for example, has shown that the region supported large human populations in the pre-Hispanic period, that people arrived there much earlier than thought, converted seasonal wetlands to fish farms, significantly modified soil characteristics, altered river channels, and, among many other things, influenced the species compositions that some planners today assume to be “untouched” by human activity.³¹ Although they might not identify their work as “political,” historical ecologists have greatly influenced political ecology by problematizing the meaning of “nature” and the role of human agency in affecting biophysical processes over the long term.

Among geographers, historical ecology research is most closely associated with the Americas, with anthropology, and is characterized by an enduring relationship to the landscape traditions established by Carl Sauer.³² Historical approaches to past human ecologies demonstrate that “pristine” landscapes are, in fact, anthropomorphized landscapes that often (politically) conceal their own human history—a history of violence, disease, demographic collapse, colonialism, migration, and conceptual transformation. Geographers have been particularly adept at reconstructing pre-Hispanic landscapes by working backward and forward from landscape change associated with biotic transfer and population change before and after 1492.³³ The increasingly sophisticated critiques of the “Pristine Myth” of the Americas have problematized—on both moral and practical grounds—the crude application of the “Yellowstone model” of nature conservation that excludes people.³⁴ By showing that past human activities could and did degrade the environment and at the same time were responsible for much of the Neotropical biodiversity today targeted for protection, historical ecologists have both humanized indigenous peoples and de-naturalized nature. Moreover, by revealing the ingenuity of indigenous peoples in the past and linking those traditions to contemporary practices, historical ecologists have become part and parcel of the larger political process substantiating and validating indigenous rights to land.³⁵ The enhanced visibility of indigenous peoples has, as a result, thrust them into the global power circuits influencing the fate of their lands, once again underscoring their agency upon the landscapes that shape and reflect their cultural identities.³⁶

In her contribution to the current special section, Susanna Hecht highlights the importance of proto-political ecologists in establishing contemporary traditions. She highlights the work of Euclides da Cunha (1866–

1909), the important Brazilian journalist who received national and international fame for his impassioned description of the Canudos War (*Os Sertões*, 1902) and for his report as part of the Brazilian-Bolivian survey team published in 1906. Although Hecht's contribution is not "historical ecology" per se, she uses the work of da Cunha to discuss four recurring themes in Amazonian studies—the empty Amazon, accidental colonialism, environmental determinism, and the nature of nature. In this sense, Hecht's contribution is part of a growing trend in political ecology and environmental history to examine current human-environmental debates in the context of past—and often underappreciated—literary approaches to critical scholarship.

A second group of political ecologists making use of historical sources includes those working in what I have termed a land-use/land-cover (landscape) change tradition. This tradition is arguably the most closely associated with Blaikie and Brookfield's historical approach to land degradation, their emphasis on the state, and their reliance on biophysical field methods. For Blaikie and Brookfield, land degradation needs to be placed in a historical context because contemporary land-use decisions often reflect changes that occurred in the past. Their "chain of explanation" model to understand this process has a lot in common with Vayda's earlier notion of "progressive contextualization," the progressive movement outward in space and backward in time necessary to explain local, contemporary human-environmental relations. For Blaikie and Brookfield, this often meant looking back to the period when older forms of mercantilist capitalism and colonialism gave way to more direct forms of colonial control, or postcolonial state intervention.³⁷ In practice, many geographers working within this tradition today look back one or two generations. As a whole, this work represents a strong critique of state intervention at the community level, as well as explanatory models of environmental change that propose single-causal factors such as population growth, grazing pressures, surplus production, crop expansion, or burning regimes.³⁸

Other geographers working within this tradition concentrate less on land degradation per se than on understanding how the multiplicity and changing configuration of social, economic, political and biophysical processes affect landscape change. Rather than using historical or biophysical sources to contextualize current land uses, these geographers often do the opposite: they reconstruct local environmental histories, or the history of local environmental change and its conceptualization, and then contextualize these histories in social, political-economic, state intervention, and discursive changes extending back a couple of generations. Political ecologists working in this historical tradition frequently make use of aerial photographs, vegetation transects, geomorphologic and soil studies, remotely sensed data, and geographic information science combined with oral histories, local-regional archival investigation, household surveys, reconstruction of the social relations of production, and landscape

observation to characterize landscapes and compare them with their conflicting representations, institutional efforts to control them, socioeconomic changes, and the material consequences of shifting ideological positions.³⁹

The contribution to the current collection by Christian Brannstrom fits solidly in this historical approach to political ecology. In his paper, Brannstrom raises four issues that spring from his title question: "what kind of history for what kind of political ecology?" He does this by drawing upon his published work on the conversion of woodland mosaics (*Cerrado*) in western São Paulo state in southeastern Brazil during the rise of coffee cultivation in the early twentieth century. Here, Brannstrom seeks to explain the causes and consequences of landscape change in relation to the microeconomics of labor relations and land use in the context of surplus extraction. He focuses on the ways that elites captured subsidized rents of the state, exploited privileged access to information, and acquired land through the manipulation of the legal-judicial system. In so doing, Brannstrom also highlights his research methods, and particularly his use of local judicial archives and sedimentation studies in local catchment basins. Sifting through rich judicial proceedings and spatializing their contents on contemporary maps, Brannstrom is able to chart the spatial distribution of land conflicts. This allows him to theorize landscape conversion in relation to socioeconomic changes based on actual, small-scale environmental reconstruction. His chapter ends by sketching out some future directions in historical political ecology. His work is strongly influenced by economic and commodity-chain approaches to landscape change and exemplifies historical political ecology within the landscape change tradition.

Conflict over resource access and control, particularly when manifest as the continuity of colonial legacies in postcolonial societies, represents a third major focus area of historical political ecology. Four characteristics tend to identify studies in this area: a research focus in Africa and Southeast Asia; strong cross-disciplinary ties to environmental history; an analysis of the discursive and material application of environmental science by the colonial and postcolonial state; and peasant resistance. Rather than concentrate on measuring environmental change per se, this group focuses on how the transfer of political economies and their attending ideologies from the metropole to the colonies shaped patterns of resource use, access and control, and how these patterns affected the livelihood strategies of local peoples to affect environmental change. In the postcolonial context, this work documents the continuity of material and discursive forms of resource control under the aegis of forest, wildlife, or biodiversity conservation. This research makes two important contributions to our understanding of society-nature relations in the developing world. First, it makes substantial use of primary historical documents to reveal how Europeans conceptualized "their" colonial landscapes and how those imaginations produced material consequences for colonized peoples, environments, and

wildlife. Second, this perspective shows how “received wisdom”—often little changed from the colonial period—continues to frame debates, represent nature and local peoples, guide policies, and influence strategies of peasant resistance in the postcolonial period.⁴⁰

The application of this approach in Southeast Asia is epitomized by the influential studies of Nancy Lee Peluso and Raymond Bryant in the teak forests of Indonesia (Java) and Burma (Tenasserim) respectively.⁴¹ The central axis of their work revolves around how the authority of scientific forestry institutionalized the control of resources, redefined the meaning of forest resources, and criminalized customary rights to forest use. This political process shaped environmental change by approving certain forms of exploitation while simultaneously denying others, all the while engendering specific forms of peasant resistance. In her study, Peluso found “that most of the kinds of changes in forest cover that foresters pejoratively call degradation derive from a specific interpretation and interest in what that forest should be, who it shall serve, and how it shall be used. Forestry has not only evolved as a science, therefore, but also as a political-economic system for resource control.”⁴² In his work, Bryant shows how British colonialism first promoted a *laissez-faire* approach to forest access and then instituted a form of scientific control that attempted to both protect and commercially exploit teak forests. Needless to say, peasant users held very different perceptions of Burmese teak forests. The continued but varied use of forests for subsistence needs thus reflected new forms of popular resistance. This “politicized environment” approach to historical political ecology has been strongly influenced by social-environmental historians of South Asia, as well as James Scott’s work on peasant moral economies and everyday forms of resistance.⁴³

Environmental historians and anthropologists examining the genealogy of environmental narratives, the application of the various “received wisdoms,” have likewise influenced the African version of this approach to historical political ecology and peasant responses.⁴⁴ Working in Madagascar, Lucy Jarosz shows how the French colonial government associated deforestation with indigenous land use practices and demographic change. In contrast, Jarosz found that the most rapid rates of deforestation occurred during periods of low population growth but high rates of government-sanctioned logging and forest clearing for coffee planting. Like Peluso and Bryant, Jarosz found that the discourse of “rational” resource management served as a form of resource and labor control for the economic needs of the colonial state.⁴⁵ Roderick Neumann’s book *Imposing Wilderness* is one of the more impressive and far-reaching monographs in the African tradition.⁴⁶ A theoretical elaboration of how Europeans constructed African “wilderness” and initially sought to set “it” aside allows Neumann’s work to speak more directly to current debates surrounding conservation and global environmental intervention.⁴⁷ Though concentrating on the Mt. Meru area of Tanzania, Neumann shows how colonial settlement and

the steady rise of protected areas in eastern and southern Africa restructured property relations and shaped the moral economy of peasant producers. The strength of Neumann's study is not charting the rise of resource conflict, but rather in showing how Mt. Meru became a source of collective identity for Meru peasants, and how this took on a moral dimension in political practice as peasants began "defending locally constituted meanings etched in the landscape."⁴⁸ By showing how missionary-educated elites first articulated a politics of peasant resistance, how colonial administrators held different ideas from one another and conservation societies in the metropolis, how early land alienations allowed administrators to misconstrue peasant notions of customary rights, how the postcolonial government ignored peasant supporters once in power, and how biophysical differences surrounding Mt. Meru influence peasant responses to this day, Neumann provides a nuanced exemplar of the colonial legacy approach to political ecology.

The contribution to the current collection by Peter Walker further illustrates the colonial legacy approach to political ecology. Walker presents a paradox: small farmers in Malawi face increasing challenges in acquiring tree products that are essential to their livelihoods, but they have responded with little enthusiasm to decades of government and donor-sponsored programs intended to assist them in planting trees. Walker shows how Malawi's colonial and postcolonial officials repeatedly built reforestation policies around the belief that small farmers would share their alarm about a perceived "fuelwood crisis." The idea of a fuelwood crisis derived from the historical dependence of the colonial and postcolonial political economies on fuelwood for curing tobacco and for transportation. This notion also converged with broader regional and even global scientific narratives of the "fuelwood gap." Walker uses archival data, contemporary household surveys, and role-playing exercises to show that these historical narratives fit very poorly with the priorities of small farmers who were expected to carry out tree planting programs conceived by colonial, postcolonial, and non-governmental planners. In so doing, Walker argues that the true "fuelwood gap" was the gap between official "received wisdom" and the actual perceptions and priorities of small farmers. He further shows that the true roots of Malawi's severe deforestation lie not in overpopulation or even commercial exploitation so much as in the historical persistence of flawed official understanding that precluded truly effective conservation responses. Like other research in colonial legacy cluster, the paper suggests that policy makers should critically examine their own narratives and preconceptions. In sum, Walker's paper demonstrates the need to more closely examine the historical structural relations and networks that can allow flawed "received wisdom" to persist over many decades despite the consistent failure of associated policies.

A fourth cluster of research that I am calling geohistorical revisionism takes a strong social, reconstructivist, field-based, scientific, and historio-

graphic approach to political ecology. Ambitious and bold, this work rewrites social, agrarian, and technological histories to underscore the value, creativity, and resilience of “subaltern” peoples, their knowledge systems, and their combined role in affecting landscape change.⁴⁹ Research in this area tends to reflect a long period of extensive (and often comparative) fieldwork that relies heavily on ethnography, biophysical research, lengthy archival investigation, and close re-readings of primary documents. Recent studies in this tradition include monographs by Zimmerer, Bassett, and Carney.⁵⁰ In their own way, each of these studies is motivated by a need to set the historical record straight, to de-simplify society-nature processes, to critique our Western and self-righteous notions of what constitutes and generates “development,” and to re-insert the ingenuity and agency of subordinated peoples into the official histories that continue to overlook and subjugate them. Each of these monographs reflects earlier monograph studies emanating from the “Berkeley School” and related traditions in geography.⁵¹

In his book *Changing Fortunes*, Zimmerer summarizes his immense work among Quechua farmers in the Paucartambo valley of the south-eastern Peruvian highlands. He argues that current wisdom articulating the causes and consequences of genetic erosion overlook the manner in which people actually created genetic diversity and the socioeconomic processes responsible for its current demise. Zimmerer makes the case that understanding the historical relationship among cultural identity, agricultural biodiversity, and shifting political-economic power relations not only explains the causes of genetic erosion but also offers a solution to its downfall. Convinced that revisionist critiques of society-nature conceptions need to offer specific recommendations for their remediation, Zimmerer’s study offers the “prospect for uniting biological conservation with agriculture that is economically sound and socially just.”⁵²

Bassett’s book, *The Peasant Cotton Revolution in West Africa*, is set in the Korhogo region of northern Côte d’Ivoire and documents the historical role of peasant farmers in the cotton production boom of the twentieth century, especially in the last 40 years.⁵³ Bassett shows how the dynamics of agrarian change reflect the ways in which peasant producers contested, negotiated and innovated social organization and technology in conjunction with larger political-economic processes mediated by the state. Throughout a profoundly historical study that makes use of archival sources from across West Africa, Bassett critiques modernist notions of how “development” actually occurs (in this case, increased production), and how alternative social histories should serve as the basis for a new kind of development policy.

In contrast to Zimmerer and Bassett, Carney’s *Black Rice* does not urge political ecologists to contribute to policy, though I cannot help but feel that the book achieves the same goal. Carney uses her extensive knowledge of West African rice cultivation to document (and effectively re-

write) the process by which the trans-Atlantic slave trade brought an indigenous and gendered knowledge system of rice planting, tool use, water control, threshing techniques, and grain storage to the colonial Carolinas. The book represents a sophisticated and impassioned plea to reinsert Africans and their crops into our knowledge of the Columbian Exchange.⁵⁴ As a whole these monographs show the revisionist power of a political ecology approach that combines extensive fieldwork, archival research, and lengthy reflection.

The contribution to the present collection by Philip Crossley fits well within this tradition of geohistorical revisionism. Crossley builds upon his decade-long study of wetland (*chinampa*) agriculture to investigate the origin and perpetuation of beliefs about Mexico's "floating gardens." Conversations with chinampa farmers and the stratigraphic evidence from field profiles inspired, in part, a critical re-reading of primary accounts of what *chinampas* looked like, who actually saw them and where, and how their views were appropriated over the centuries within different academic discussions. Here, Crossley observes that three very brief descriptions became inordinately influential as the narratives in which floating gardens were significant became recast in various political and academic contexts. But, like the three monographs just discussed, Crossley seeks to do more than expose a historical fallacy. He shows how the image of "floating gardens" became accepted truth, and an integral element of the "regional discursive formation" of "Aztec Mexico." Although Crossley does not dwell on the ecological, economic, or social implications of this discursive formation, he notes that they were profound but have remained largely unstudied.

History and Political Ecology in Eastern Nicaragua

Historical analysis in political ecology implies more than locating contemporary human-environmental processes in a historical context. It involves making connections between social process and material outcomes across spatial and temporal scales; using combined insights from lengthy field, biophysical, and historical research to examine the relationships between social and environmental change; exposing the contemporaneous and current meaning of past social-environmental processes for multiple actors—many of whom left little trace in the historical record. By way of a conclusion, I return to the example that began this introduction: the nature of a historical political ecology in eastern Nicaragua.

The late geographer Bernard Nietschmann was instrumental in pioneering both the human-cultural and political ecology approaches in geography and, of course, the majority of his professional work focused on the Mosquitia, or eastern Nicaragua. The publication of his seminal book *Between Land and Water* in 1973 showed the power of a human-cultural ecology approach that made use of historical materials to contextualize the ethnographic present.⁵⁵ Still, by Nietschmann's own confession, his

use of history remained problematic. In a follow-up article, Nietschmann critiqued his earlier ecosystemic understanding of cultural adaptation: “One-time village and regional studies allow little perspective on the processes of socioeconomic or ecological change. . . . By concentrating on one point in time, many ahistorical studies describe human adaptation and ecological relationships as if they were static.” By the end of his paper, Nietschmann conceded that “Miskito society and culture are much more resistant to deep erosion from economic waves than [he] believed at first.” What is perceived in Miskito society as “a tradition,” he wrote, “[is] more an image of the observer than of the observed.” Indeed, to survive culturally, Miskito society has had to “change to remain unchanged.”⁵⁶ It is my opinion, however, that Miskito society and culture are not simply resistant to externally induced processes and change but are, rather, a product of them. This distinction puts the meanings of the past and of “human adaptation” in a significantly different light.

It is my opinion that a large portion of human-cultural and political ecology research takes theoretical positions that dichotomize subaltern practice and past globalizations. This dichotomy, I suggest, assumes that local, peasant/indigenous perspectives, ambitions, memories, ideas, consciousnesses, and resource uses are somehow separated from global-local continuums in the past. This is problematic. In the Mosquitia, as in many other parts of Latin America and the world, many aspects of “local” cultural traditions are the product of past globalizations and, in Latin America, this means well before the late nineteenth century. My own research finds that one of the most important Miskito “traditions” is cultural syncretism—the ongoing appropriation, modification, and popular dissemination of exogenous cultural forms. I have argued elsewhere that most Miskito cultural beliefs, political manifestations of identity, and social practices are syncretic, the complex result of 450 years of contact with Western (and African) ideas (e.g., kingship, sovereignty, nationhood, Christianity), technologies (e.g., the sail, iron, weapons), and market demands (e.g., Hawksbill turtle shell, Indian slaves, mahogany).⁵⁷ Does this mean that the Miskito did not culturally adapt to their regional ecosystems? No, but it problematizes the manner in which this adaptation occurred and the social meanings attached to particular patterns of resource use. It also problematizes the notion of culture, how it forms, and how it mediates human-environmental relationships—cutting to the heart of all human-cultural and political ecology approaches. As Nicholas Dirks posits, “If culture itself, as an object of knowledge and a mode of knowledge about certain objects, was formed in relation to colonial histories, it is all the more difficult to recognize the ways in which specific cultural forms were themselves constituted out of colonial encounters.”⁵⁸

Despite his own research showing that the Miskito extracted land and marine resources for European markets no later than the early 1600s, for Nietschmann “subsistence considerations usually have predominated.”⁵⁹

This belief combined with a genuine love for the Miskito people to inform his later and openly political writings about the “Miskito Nation” during their war against the Sandinista government in the 1980s.⁶⁰ If attempts to illuminate the Miskito past had been subsumed in Nietschmann’s effort to explicate the viability of their subsistence ecology before 1980, his post-1980 writings highlighted Miskito history, albeit selectively to emphasize Miskito self-determination.⁶¹ A great writer, Nietschmann narrated a stable Miskito story of fierce ethnic resistance first to a colonial empire and then to a centralized state. Thus, in his historical accounts, Miskito slave raids upon Spanish settlements in the eighteenth century were described as “homeland defense”; the Miskito Kingdom—a complex polity constituted by British colonialism—was an autochthonous social institution. Meanwhile, U.S. neocolonialism, colossal resource economies, and racially segregated company towns do not seem to have impacted Miskito culture much at all. A Miskito ethnic identity was a long-time fact, not a difficult social formation constructed in relation to colonial symbols—such as crowns, scepters, swords, ornate uniforms, and the Miskito flag displaying the Union Jack—that varied and antagonistic Miskito groups used to instill a shared identity only in the early twentieth century.⁶²

The truncated history Nietschmann used to justify Miskito armed struggle in the 1980s opened him up to a great deal of criticism from Sandinista supporters. These critics made use of their own equally selective interpretations of the past. Here—and I am synthesizing literally dozens of narratives—the Miskito were described as “zambos,” or inauthentic Indians, British lackeys (and hence traitors), victims of Moravian missionaries, labor cogs in the imperialistic wheel of U.S. capitalism, and so forth. These discourses are intrinsic to Nicaraguan nationalism, ideas of territorial integrity, and myths of *mestizaje*—a mixed-race ideology that denies the existence of ethnic and cultural difference while simultaneously discriminating against it. The more sophisticated of Nietschmann’s critics, however, noted that the Miskito expressed little concern about their lands and made few political claims based on ethnic rights or identity (as they did during and after the war) when North American ventures ran roughshod over “their” natural resources. The idea that steady wage labor subdued Miskito independence and instilled something akin to a false consciousness was thus hypothesized to both explain capitalist acquiescence before 1980 and resistance to the Sandinistas after 1980. This view is no less an idealized history than Nietschmann’s. Indeed, it is my contention that both views are essentially ahistorical, and that this matters. Despite their differences, these essentialized histories have become a part of the larger political processes circumscribing human-environmental relationships in the Mosquitia. They do this by shaping perceptions, advising markets, guiding policy, influencing public discourses, and instigating reactions: they become part of the social reality that political ecolo-

gists need to understand to make sense of society-nature relations and the forces responsible for change at the local level.

Dominant conceptions of the past have tangibly and intangibly influenced Miskito conceptions of their own past. My field and ethnographic work among the Miskito and Sumu Indians of northeastern Nicaragua suggests that understanding political-ecological relationships in postcolonial societies requires getting a handle on how indigenous interpretations of the past have formed within the crucible of poverty, political marginality, and recent notions of ethnic rights. In the Mosquitia, indigenous interpretations of the past support and give meaning to political struggles and, as in other parts of Latin America, “strategic essentialism” underscores a good deal of their ethnic politics.⁶³ Make no mistake, Miskito ethnic politics are about gaining the power to control natural resources—not to defend a “subsistence ethic” grounded in a moral economy (though that is part of it)—for purposes of directing and benefiting from their inevitable commercialization. A frequent indigenous refrain that I have heard over the last decade in the Mosquitia is “we wish to benefit from our natural resources in the same way that others have in the past.”⁶⁴ If narratives such as these are involved in shaping society-nature relations—and they are—then we need to know where they come from and how they tie into larger processes of identity formation that affect landscape change.

Indigenous identities in the Mosquitia are influenced by the values and ideologies embedded in their regional landscapes, the actual social and material processes that created those landscapes, and the manner in which the landscapes provide a cultural basis for social memory and collective action.⁶⁵ In Nicaragua, regional landscapes are literally and figuratively saturated with ideological premises emanating from colonial and capitalist institutions in general, and the commercial role of natural resources in particular. In the Mosquitia, defunct copper smelters tower from rain forests, abandoned steam engines serve as playgrounds for children, and narrow gauge rail lines once servicing banana plantations still imprint the savanna. In other words, subaltern conceptions of natural resources are strongly influenced by economic histories and continuing market opportunities. Conceptualizing “subaltern” thought and practice as somehow outside these conjunctures presents significant risks for political ecologists. It is my view that political ecologists often apply the motifs of “peasant resistance” or “moral economy” without adequately investigating how colonial forms and Western ideologies permeate them both. Stated differently, although political ecologists do a good job explicating that conflicts over natural resources are simultaneously struggles over cultural meaning, they have been less astute at problematizing *how* resource economies and struggles shape the cultural meanings of natural resources for local users, the historical dimension of the discourses subalterns use to justify control of those resources, and how all this affects data

collection in the field. Such complexity forces us to remove the ambiguities associated with an ill-defined “historical context” and necessitates a historical political ecology rooted in a field-informed re-reading of historical sources.

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Notes

1. The eastern half of Nicaragua, also called the Mosquitia, contains four indigenous groups—the Miskito (135,000), Sumu (8,000), Rama (1,000) and Garifuna (1,500), and 39,000 long-term resident descendants of African slaves and early twentieth-century immigrants called Creoles; Karl H. Offen, “Mapping Indigenous Rights: Negotiating Territory and Autonomy in North-eastern Nicaragua,” in Michael K. Steinberg, ed., *Politicized Indigenous Landscapes* (Austin: University of Texas Press, in press).
2. For an overview of the indigenous politics of identity and its relation to a resurgent indigenous activism in Latin America since the late 1980s; see Charles R. Hale, “Cultural Politics of Identity in Latin America,” *Annual Review of Anthropology* 26 (1997): 567-91; Alison Brysk, *From Tribal Village to Global Village. Indian Rights and International Relations in Latin America* (Stanford: Stanford University Press, 2000); Donna Lee Van Cott, *The Friendly Liquidation of the Past: The Politics of Diversity in Latin America* (Pittsburgh: The University of Pittsburgh Press, 2000); Donna Lee Van Cott, “Indigenous Struggle,” *Latin American Research Review* 38:2 (2003): 220-33; Kay B. Warren and Jean E. Jackson, eds., *Indigenous Movements, Self-Representation, and the State in Latin America* (Austin: University of Texas Press, 2002).
3. Karl H. Offen, “Narrating Place and Identity, or Mapping Miskitu Land Claims in Northeastern Nicaragua,” *Human Organization* 62:4 (2003): 382-92.
4. Anglo-Affinity refers to the acceptance of Anglo-American ideologies and premises by indigenous and Creole peoples of eastern Nicaragua and how this acceptance has aided their own subjugation; see Charles R. Hale, *Resistance and Contradiction: Miskitu Indians and the Nicaraguan State, 1894-1987* (Stanford: Stanford University Press, 1994); Edmund T. Gordon, *Disparate Diasporas: Identity and Politics in an African-Nicaraguan Community* (Austin: University of Texas Press, 1998).
5. There are exceptions to the rule, and many of them are geographers, see, for example, James J. Parsons, “Gold Mining in the Nicaraguan Rain Forest,” *Association of Pacific Coast Geographers* 17 (1955): 49-55; Parsons, “The Miskito Pine Savanna of Nicaragua and Honduras,” *Annals of the Association of American Geographers* 45:1 (1955): 36-63; William M. Denevan, *The Upland Pine Forests of Nicaragua* (Berkeley: University of California Press, 1961); William V. Davidson, “The Garifuna of Pearl Lagoon,” *Ethnohistory* 27:1 (1980): 271-97.
6. Karl H. Offen, “The Geographical Imagination, Resource Economics, and Nicaraguan Incorporation of the Mosquitia, 1838-1909,” in Christian Brannstrom, ed., *Territories, Commodities and Knowledges: Latin American Environmental History in the Nineteenth and Twentieth Centuries* (London: Institute of Latin American Studies, 2004): 50-89.
7. Piers Blaikie and Harold Brookfield, *Land Degradation and Society* (London: Methuen, 1987): 46.
8. Raymond L. Bryant, “Political Ecology: An Emerging Research Agenda in Third-World Studies,” *Political Geography* 11:1 (1992): 23. See also Raymond L. Bryant and Sinéad Bailey, *Third World Political Ecology* (New York: Routledge, 1997); Raymond L. Bryant, “Power, Knowledge and Political Ecology in the Third World,” *Progress in Physical Geography* 22:1 (1998): 79-94.

9. Richard Peet and Michael Watts, "Liberation Ecology: Development, Sustainability, and Environment in an Age of Market Triumphalism," in Peet and Watts, eds., *Liberation Ecologies. Environment, Development, Social Movements* (London and New York: Routledge, 1996): 12; see also Bruce Braun and Noel Castree, *Remaking Reality: Nature at the Millennium* (New York: Routledge, 1998); Noel Castree and Bruce Braun, eds., *Social Nature: Theory, Practice, and Politics* (New York: Blackwell Publishers, 2001).
10. Karl S. Zimmerer and Thomas J. Bassett, "Approaching Political Ecology: Society, Nature, and Scale in Human-Environment Studies," in Zimmerer and Bassett, eds., *Political Ecology: An Integrative Approach to Geography and Environment-Development Studies* (New York: Guilford Press, 2003): 14.
11. I concentrate on political ecology approaches taken by geographers. For recent analyses of political ecology in anthropology, see James B. Greenburg and Thomas K. Park, "Political Ecology," *Journal of Political Ecology* 1 (1994): 1-12; Paul E. Little, "Environments and Environmentalisms in Anthropological Research: Facing a New Millennium," *Annual Review of Anthropology* 28 (1999): 253-84; Michael Goldman and Rachel A. Schurmann, "Closing the 'Great Divide': New Social Theory on Society and Nature," *Annual Review of Anthropology* 26 (2000): 563-84; Susan Paulson, Lisa L. Gezon, and Michael Watts, "Introduction to Special Issue: Locating the Political in Political Ecology," *Human Organization* 62:3 (2003): 205-17.
12. I acknowledge that the term social justice is controversial. Some reviewers of this paper felt social equity might be more acceptable to a broader cross-section of political ecologists. I did not make the change because I felt that in multicultural states issues of justice, particularly as the recognition of difference, is a first step to social equity and, thus, more immediate.
13. William Cronon, "The Uses of Environmental History," *Environmental History Review* 17:3 (1993): 7; see also David Arnold, *The Problem of Nature: Environment, Culture and European Expansion* (Oxford: Blackwell Publishers, 1996): 9.
14. See the retrospective collection in Volume 70:1 (2001) of the *Pacific Historical Review*, footnotes 43 and 44, and Christian Brannstrom in this volume.
15. Programmatic statements characterizing political ecology are numerous. These elements reflect my own convictions but originate from my readings of others, especially Thomas J. Bassett, "The Political Ecology of Peasant-Herder Conflicts in the Northern Ivory Coast," *Annals of the Association of American Geographers* 78:3 (1988): 433-52; Bryant, "Political Ecology"; Piers Blaikie, "A Review of Political Ecology: Issues, Epistemology and Analytical Narratives," *Zeitschrift für Wirtschaftsgeographie* 43:3-4 (1999): 131-47; Michael J. Watts, "Political Ecology," in Trevor Barnes and Eric Sheppard, eds., *A Companion to Economic Geography* (Oxford: Blackwell, 2000): 257-74; Paul Robbins, *Political Ecology: A Critical Introduction* (New York: Blackwell, 2004): chap. 2.
16. Karl W. Butzer, "Cultural Ecology," in Gary L. Gaile and Cort J. Willmott, eds., *Geography in America* (Columbus: Merrill Publishing Company, 1989): 202. This anti-modernist approach in geography can be traced back to the work of Carl Sauer and others; see, for example, William L. Thomas Jr., Carl O. Sauer, Marston Bates, and Lewis Mumford, eds., *Man's Role in Changing the Face of the Earth*, 2 vols. (Chicago: University of Chicago Press, 1956); Robbins, *Political Ecology*.
17. The idea of "bringing political ecology home," or examining environmental conflict in the First World through a political ecology approach, has been around for some time. Open to debate, however, is how the meaning of marginalization, social justice, political disempowerment, cultural difference, researcher ethics, transnational NGOs, centralized states beholden to international creditors and lenders, postcolonialism, and the authority of scientific discourses—often theorized in a developing world context—can be transferred; see James McCarthy, "First World Political Ecology: Lessons from the Wise Use Movement," *Environment and Planning A* 34:7 (2002): 1281-302; Paul Robbins, "Obstacles to a First World Political Ecology: Looking Near Without Looking Up," *Environment and Planning A* 34:8 (2002): 1509-13; Peter A. Walker, "Reconsidering 'Regional' Political Ecologies: Toward a Political Ecology of the Rural American West," *Progress in Human Geography* 27:1 (2003): 7-24; Zimmerer and Bassett, "Approaching Political Ecology."
18. For a representative opinion on the former, see Blaikie, "A Review of Political Ecology," 131-47, and for the latter see Zimmerer and Bassett, "Approaching Political Ecology," 2.
19. Andrew P. Vayda and Bradley B. Walters, "Against Political Ecology," *Human Ecology* 27:1 (1999): 167-79.
20. Zimmerer and Bassett, "Approaching Political Ecology," 3; see also Simon P. J. Batterbury and Anthony J. Bebbington, "Environmental Histories, Access to Resources and Landscape Change: An Introduction," *Land Degradation & Development* 10 (1999): 279-89.

21. Peet and Watts, "Liberation Ecology," 37.
22. Butzer, "Cultural Ecology," 192-208; Bryant, "Political Ecology," 12-36; Blaikie, "A Review of Political Ecology," 131-47; Watts, "Political Ecology," 257-74; Paulson, Gezon, and Watts, "Introduction to Special Issue: Locating the Political in Political Ecology," 205-17.
23. A short list of human-cultural ecology studies that would dispute this criticism include John W. Bennett, *The Ecological Transition. Cultural Anthropology and Human Adaptation* (New York: Pergamon Press, 1976); Lawrence S. Grossman, *Peasants, Subsistence Ecology, and Development in the Highlands of Papua New Guinea* (Princeton: Princeton University Press, 1984); Karl W. Butzer, "The Realm of Cultural Ecology: Adaptation and Change in Historical Perspective," in Billie Lee Turner II et al., eds., *The Earth as Transformed by Human Action* (New York: Cambridge University Press, 1990): 685-702; Gregory Knapp, *Andean Ecology: Adaptive Dynamics in Ecuador* (Boulder: Westview Press, 1991); Robert Mc C. Netting, *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture* (Stanford: Stanford University Press, 1993); Stanley F. Stevens, *Claiming the High Ground: Sherpas, Subsistence, and Environmental Change in the Highest Himalaya* (Berkeley: University of California Press, 1993).
24. Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968); Garrett Hardin, "The Tragedy of the Commons," *Science* 162 (1968): 1243-8.
25. Susanna Hecht, "Cattle Ranching in Amazonia: Political and Ecological Considerations," in Marianne Schmink and Charles H. Wood, eds., *Frontier Expansion in Amazonia* (Gainesville: University of Florida Press, 1984): 366-98; Susanna Hecht, "Environment, Development and Politics: Capital Accumulation and the Livestock Sector in Eastern Amazonia," *World Development* 13:6 (1985): 663-84; Stephen Bunker, *Underdeveloping the Amazon: Extraction, Unequal Exchange, and the Failure of the Modern State* (Urbana and Chicago: University of Illinois Press, 1985); John O. Browder, "Public Policy and Deforestation in the Brazilian Amazon," in Robert Repetto and Malcolm Gillis, eds., *Public Policies and the Misuse of Forest Resources* (Cambridge: Cambridge University Press, 1988): 247-97; Susanna Hecht and Alexander Cockburn, *The Fate of the Forest* (London: Verso, 1989); Anthony B. Anderson, ed., *Alternatives to Deforestation: Steps toward Sustainable Use of the Amazon Rain Forest* (New York: Columbia University Press, 1990).
26. Michael J. Watts, "On the Poverty of Theory: Natural Hazards Research in Context," in Kenneth Hewitt, ed., *Interpretations of Calamity, from the Viewpoint of Human Ecology* (Boston: Allen Unwin, 1983): 231-62; Michael J. Watts, *Silent Violence: Food, Famine, & Peasantry in Northern Nigeria* (Berkeley: University of California Press, 1983).
27. Piers M. Blaikie, *The Political Economy of Soil Erosion in Developing Countries* (New York: Wiley, 1985); Blaikie and Brookfield, *Land Degradation and Society*, 17.
28. For a positive take on the Bruntland Report, see Susan C. Stonich, "I Am Destroying the Land!": *The Political Ecology of Poverty and Environmental Destruction in Honduras* (Boulder: Westview Press, 1993); and for its deconstruction see Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton: Princeton University Press, 1995).
29. Jonathan A. Fox and L. David Brown, eds., *The Struggle for Accountability: The World Bank, NGOs, and Grassroots Movements* (Cambridge, MA: The MIT Press, 1998); Korinna Horta, "Biodiversity Conservation and the Political Economy of International Financial Institutions," in Philip Stott and Sian Sullivan, eds., *Political Ecology: Science, Myth, Power* (New York: Oxford University Press, 2001): 179-202.
30. William Balée, "Historical Ecology: Premises and Postulates," in Balée, ed., *Advances in Historical Ecology* (New York: Columbia University Press, 1998): 16; see also Carole L. Crumley, *Historical Ecology: Cultural Knowledge and Changing Landscapes* (Santa Fe, NM: School of American Research Press, 1994); David L. Lentz, ed., *Imperfect Balance: Landscape Transformations in the Precolumbian Americas* (New York: Columbia University Press, 2000).
31. William Balée, "The Culture of Amazonian Forests," *Advances in Economic Botany* 7 (1989): 1-21; Balée, *Footprints of the Forest: Káapor Ethnobotany: The Historical Ecology of Plant Utilization by an Amazonian People* (New York: Columbia University Press, 1994); Anna C. Roosevelt, ed., *Amazonian Indians from Prehistory to the Present: Anthropological Perspectives* (Tucson: University of Arizona Press, 1994); William M. Denevan, "A Bluff Model of Riverine Settlement in Prehistoric Amazonia," *Annals of the Association of American Geographers* 86:4 (1996): 654-81; Clark L. Erickson, "An Artificial Landscape-Scale Fishery in the Bolivian Amazon," *Nature* 408:6809 (2000): 190-3; Michael J. Heckenberger, Afukaka Kuikuro, Urissapá Tabata Kuikuro, J. Christian Russell, Morgan Schmidt, Carlos Fausto, and Bruna Franchetto, "Amazonia 1492: Pristine Forest or Cultural Parkland?" *Science* 301:5640 (2003): 1710-4; Hugh Raffles and Antoinette M.G.A. WinklerPrins, "Further Reflections on Amazonian Environmental History: Transformations of Rivers and Streams," *Latin American Research Review* 38:3 (2003): 165-87.

32. Carl O. Sauer, "The Morphology of Landscape," in John Leighly, ed., *Land and Life* (1925; reprint, Berkeley: University of California Press, 1963): 315-50; Carl L. Sauer, *The Early Spanish Main* (Berkeley: University of California Press, 1966); William M. Denevan, "The Pristine Myth: The Landscape of the Americas in 1492," *Annals of the Association of American Geographers* 82:3 (1992): 369-85; Andrew Sluyter, "The Making of the Myth in Postcolonial Development: Material-Conceptual Landscape Transformation in Sixteenth-Century Veracruz," *Annals of the Association of American Geographers* 89:3 (1999): 377-401; Sluyter, *Colonialism and Landscape: Postcolonial Theory and Applications* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 2002).
33. Karl W. Butzer, ed., *The Americas Before and After 1492: Current Geographical Research* (New York: Blackwell, 1992); Karl W. Butzer, "Biological Transfer, Agricultural Change, and Environmental Implications of 1492," in Ronny R. Duncan, ed., *International Germplasm Transfer: Past and Present* (Madison, WI: Crop Science Society of America, 1995): 3-29; Karl W. Butzer and Elisabeth K. Butzer, "The 'Natural' Vegetation of the Mexican Bajío: Archival Documentation of a 16th Century Savanna Environment," *Quaternary International* 43/44 (1997): 161-72; William E. Doolittle, *Cultivated Landscapes of Native North America* (Oxford: Oxford University Press, 2000); William M. Denevan, *Cultivated Landscapes of Native Amazonia and the Andes* (Oxford: Oxford University Press, 2001); Thomas M. Whitmore and Billie Lee Turner II, *Cultivated Landscapes of Middle America on the Eve of Conquest* (Oxford: Oxford University Press, 2001); Sluyter, "Material-Conceptual Landscape Transformation and the Emergence of the Pristine Myth in Early Colonial Mexico," in Zimmerer and Bassett, eds., *Political Ecology*, 221-39.
34. Stan Stevens, ed., *Conservation through Cultural Survival: Indigenous Peoples and Protected Areas* (Washington, D.C.: Island Press, 1997); Charles Zerner, ed., *People, Plants and Justice: The Politics of Nature Conservation* (New York: Columbia University Press, 2000).
35. Stephen Brush and Doreen Stabinsky, eds., *Valuing Local Knowledge: Indigenous People and Intellectual Property Rights* (Washington, D.C.: Island Press, 1996); Ted L. Gragson and Ben G. Blount, eds., *Ethnoecology: Knowledge, Resources, and Rights* (Athens, GA: University of Georgia Press, 1999); Karl S. Zimmerer, "Report on Geography and the New Ethnobiology," *Geographical Review* 91:4 (2001): 725-34; Douglas E. Deur, "Rethinking Precolonial Plant Cultivation on the Northwest Coast of North America," *The Professional Geographer* 54:2 (2002): 140-57; Deur, "Indigenous Peoples: Contested Lands, Contested Identities," *Historical Geography* 30 (2002): 5-14.
36. The heightened awareness of "traditional environmental knowledge" and land rights now commonly extends to rural blacks in parts of Latin America, particularly in Pacific Colombia, see Arturo Escobar, "Whose Knowledge, Whose Nature? Biodiversity, Conservation, and the Political Ecology of Social Movements," *Journal of Political Ecology* 5 (1998): 53-82; Arturo Escobar, "Culture Sits in Places: Reflections on Globalism and Subaltern Strategies of Localization," *Political Geography* 20 (2001): 139-74; Karl H. Offen, "The Territorial Turn: Making Black Territories in Pacific Colombia," *Journal of Latin American Geography* 2:1 (2003): n.p.
37. Piers Blaikie and Harold C. Brookfield, *Land Degradation and Society*, 68, 100-1; Andrew P. Vayda, "Progressive Contextualization: Methods for Research in Human Ecology," *Human Ecology* 11:3 (1983): 265-81. See also Brookfield, *Colonialism, Development and Independence: The Case of the Melanesian Islands in the South Pacific* (Cambridge: Cambridge University Press, 1972).
38. Bassett, "The Political Ecology of Peasant-Herder Conflicts," 433-52; Matthew D. Turner, "Overstocking the Range: A Critical Analysis of the Environmental Science of Sahelian Pastoralism," *Economic Geography* 69:4 (1993): 402-21; Lawrence S. Grossman, "Soil Conservation, Political Ecology, and Technological Change on Saint Vincent," *The Geographical Review* 87:3 (1997): 353-74; Lawrence S. Grossman, *The Political Ecology of Bananas: Contract Farming, Peasants, and Agrarian Change in the Eastern Caribbean* (Chapel Hill: University of North Carolina Press, 1998); Simon Batterbury, "Landscapes of Diversity: A Local Political Ecology of Livelihood Diversification in South-Western Niger," *Ecumene* 8:4 (2001): 437-64.
39. Paul Robbins, "Authority and Environment: Institutional Landscapes in Rajasthan, India," *Annals of the Association of American Geographers* 88:3 (1998): 410-35; Paul Robbins, "Paper Forests: Imagining and Deploying Exogenous Ecologies in Arid India," *Geoforum* 29 (1998): 69-86; Paul Robbins, "Tracking Invasive Land Covers in India or Why Our Landscapes Have Never Been Modern," *Annals of the Association of American Geographers* 91:4 (2001): 637-54; Paul Robbins, "Beyond Ground Truth: GIS and the Environmental Knowledge of Herders, Professional Foresters, and Other Traditional Communities," *Human Ecology* 31:2 (2003): 233-

- 53; Thomas J. Bassett and Koli Bi Zuéli, "Environmental Discourses and the Ivorian Savanna," *Annals of the Association of American Geographers* 90:1 (2000): 67-95; Christian Brannstrom, "Coffee Labor Regimes and Deforestation on a Brazilian Frontier, 1915-1965," *Economic Geography* 76 (2000): 326-46; Brannstrom, "Rethinking the 'Atlantic Forest' of Brazil: New Evidence for Land Cover and Land Value in Western São Paulo, 1900-1930," *Journal of Historical Geography* 28:3 (2002): 420-39; Matthew D. Turner, "Methodological Reflections on the Use of Remote Sensing and Geographic Information Science in Human Ecological Research," *Human Ecology* 31:2 (2003): 255-79.
40. Bruce Willems-Braun refers to these wisdoms as "buried epistemologies," see Willems-Braun, "Buried Epistemologies: The Politics of Nature in (Post)Colonial British Columbia," *Annals of the Association of American Geographers* 87:1 (1997): 3-31; Willems-Braun, *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast* (Minneapolis: University of Minnesota Press, 2002).
 41. Though neither Peluso nor Bryant were trained as geographers at the doctoral level, their research approaches remain central to historical political ecology; see Nancy Lee Peluso, *Rich Forests, Poor People: Resource Control and Resistance in Java* (Berkeley: University of California Press, 1992); Raymond L. Bryant, "From Laissez-Faire to Scientific Forestry. Forest Management in Early Colonial Burma, 1826-85," *Forest & Conservation History* 38:4 (1994): 160-70; Bryant, "Romancing Colonial Forestry: The Discourse of 'Forestry as Progress' in British Burma," *The Geographical Journal* 162:2 (1996): 169-78, Raymond L. Bryant, *The Political Ecology of Forestry in Burma 1824-1994* (Honolulu: University of Hawaii Press, 1997).
 42. Peluso, *Rich Forests, Poor People*, 237; Peluso, "The Political Ecology of Extraction and Extractive Reserves in East Kalimantan, Indonesia," *Development & Change* 23:4 (1992): 49-74; Peluso, "Whose Woods Are These? Politics of Mapping Forests in Kalimantan," *Antipode* 27:4 (1995): 383-406; Peluso, "Fruit Trees and Family Trees in an Anthropogenic Forest: Ethics of Access, Property Zones, and Environmental Change in Indonesia," *Comparative Studies in Society and History* 38:3 (1996): 510-48.
 43. Ramachandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya* (1989; reprint, Berkeley: University of California Press, 1990); Madhav Gadgil and Ramachandra Guha, *This Fissured Land: An Ecological History of India* (1992; reprint Berkeley: University of California Press, 1993); Richard P. Tucker, "The Depletion of India's Forests under British Imperialism: Planters, Foresters, and Peasants in Assam and Kerala," in Donald Worster, ed., *The Ends of the Earth. Perspectives on Modern Environmental History* (Cambridge: Cambridge University Press, 1988): 118-40; Richard H. Grove, Vinita Damodaran, and Satpal Sangwan, eds., *Nature and the Orient: The Environmental History of South and Southeast Asia* (Delhi: Oxford University Press, 1998); Arun Agrawal and K. Sivaramakrishnan, eds., *Agrarian Environments: Resources, Representation, and Rule in India* (Durham, NC: Duke University Press, 2000). For the influential work by James C. Scott and others working in the peasant resistance tradition, see Scott, *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia* (New Haven, CT: Yale University Press, 1976); Scott, *Weapons of the Weak: Everyday Forms of Peasant Resistance* (New Haven: Yale University Press, 1985); Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (New Haven: Yale University Press, 1990); Forrest D. Colburn, ed., *Everyday Forms of Peasant Resistance* (Armonk, NY: M.E. Sharpe, Inc., 1989).
 44. For a representative sample of recent literature in this trajectory, see John M. Mackenzie, ed., *Imperialism and the Natural World* (Manchester: Manchester University Press, 1990); James C. McCann, *People of the Plow: A Modern History of Highland Agriculture in Ethiopia* (Madison: University of Wisconsin Press, 1995); James C. McCann, "The Plow and the Forest. Narratives of Deforestation in Ethiopia, 1840-1992," *Environmental History* 2:2 (1997): 138-59; Melissa Leach and Robin Mearns, eds., *The Lie of the Land: Challenging Received Wisdom on the African Environment* (Oxford: James Currey and Portsmouth, 1996); James Fairhead and Melissa Leach, *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic* (Cambridge: Cambridge University Press, 1996); Fairhead and Leach, "Fashioned Forest Pasts and the Occlusion of History: Conservation, Landscape and Politics in the Historiography of West Africa," *Development and Change* 31:1 (2000): 35-59; Donald S. Moore, "Clear Waters and Muddied Histories: Environmental History and the Politics of Community in Zimbabwe's Eastern Highlands," *Journal of Southern African Studies* 24:2 (1998): 377-403; Terrance Ranger, *Voices from the Rocks: Nature, Culture, and History in the Matopos Hills of Zimbabwe* (Indianapolis: University of Indiana Press, 1999); William Beinart, "African History and Environmental History," *African Affairs* 99:395 (2000): 269-302.

45. Lucy Jarosz, "Defining and Explaining Tropical Deforestation: Shifting Cultivation and Population Growth in Colonial Madagascar (1896-1940)," *Economic Geography* 69:4 (1993): 366-79.
46. Roderick P. Neumann, *Imposing Wilderness: Struggles over Livelihood and Nature Preservation in Africa* (Berkeley: University of California Press, 1998); see also Neumann, "Political Ecology of Wildlife Conservation in the Mt. Meru Area of Northeastern Tanzania," *Land Degradation and Society* 3 (1992): 85-98; Neumann, "Ways of Seeing Africa: Colonial Recasting of African Society and Landscape in Serengeti National Park," *Ecumene* 2:2 (1995): 149-69; Neumann, "Land, Justice, and the Politics of Conservation in Tanzania," in Charles Zerner, ed., *People, Plants and Justice* (New York: Columbia University Press, 2000): 117-33.
47. Juanita Sundberg, "NGO Landscapes in the Maya Biosphere Reserve, Guatemala," *The Geographical Review* 88:3 (1998): 388-412; Richard A. Schroeder, "Geographies of Environmental Intervention in Africa," *Progress in Human Geography* 23:3 (1999): 359-78; Zerner, *People, Plants and Justice*.
48. Neumann, *Imposing Wilderness*, 176.
49. By "subaltern," I mean marginalized and oppressed peoples whose consciousness and agency have been effectively written out of history; see Ranajit Guha and Gayatri C. Spivak, eds., *Selected Subaltern Studies* (Delhi: Oxford University Press, 1988).
50. Karl S. Zimmerer, *Changing Fortunes: Biodiversity and Peasant Livelihood in the Peruvian Andes* (Berkeley: University of California Press, 1996); Thomas J. Bassett, *The Peasant Cotton Revolution in West Africa: Côte D'Ivoire, 1880-1995* (Cambridge: Cambridge University Press, 2001); Judith A. Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, MA: Harvard University Press, 2001).
51. A few of the pioneering monographs that I have in mind include Sauer, *Early Spanish Main*; Watts, *Silent Violence*; Karl W. Butzer, *Early Hydraulic Civilization in Egypt: A Study in Cultural Ecology* (Chicago: University of Chicago Press, 1976).
52. Zimmerer, *Changing Fortunes*, 3; see also Zimmerer, "Agricultural Biodiversity and Peasant Rights to Subsistence in the Central Andes During Inca Rule," *Journal of Historical Geography* 19:1 (1993): 15-32, and Karl S. Zimmerer, "The Reworking of Conservation Geographies: Non Equilibrium Landscapes and Nature-Society Hybrids," *Annals of the Association of American Geographers* 90:2 (2000): 356-69.
53. Bassett, *The Peasant Cotton Revolution*.
54. Carney, *Black Rice*; see also Carney, "Landscapes of Technology Transfer: Rice Cultivation and African Continuities," *Technology and Culture* 37:1 (1996): 5-33; Carney, "The Role of African Rice and Slaves in the History of Rice Cultivation in the Americas," *Human Ecology* 26:4 (1998): 525-45; Carney, "The African Antecedents of Uncle Ben in U.S. Rice History," *Journal of Historical Geography* 29:1 (2003): 1-21; and Carney and Robert A. Voeks, "Landscape Legacies of the African Diaspora in Brazil," *Progress in Human Geography* 27:2 (2003): 139-52.
55. Bernard Nietschmann, *Between Land and Water: The Subsistence Ecology of the Miskito Indians, Eastern Nicaragua* (New York: Seminar Press, 1973).
56. Bernard Nietschmann, "Ecological Change, Inflation, and Migration in the Far Western Caribbean," *The Geographical Review* 69:1 (1979): 2, 22, 23.
57. Karl H. Offen, "The Sambo and Tawira Miskitu: The Colonial Origins and Geography of Miskitu Differentiation in Eastern Nicaragua and Honduras," *Ethnohistory* 49:2 (2002): 319-72. See also Offen, "British Logwood Extraction from the Mosquitia: The Origin of a Myth," *Hispanic American Historical Review* 80:1 (2000): 113-35; Offen, "Ecología Cultural Miskita En Los Años 1650-1850," *Wani* 30 (2002): 42-59; Offen, "Narrating Place and Identity," Offen, "The Geographical Imagination, Resource Economies, and Nicaraguan Incorporation of the Mosquitia," 50-89.
58. Nicholas B. Dirks, "Introduction: Colonialism and Culture," in Dirks, ed., *Colonialism and Culture* (Ann Arbor: University of Michigan Press, 1992): 4.
59. Bernard Nietschmann, "Hunting and Fishing Focus among the Miskito Indians, Eastern Nicaragua," *Human Ecology* 1:1 (1972): 60.
60. Bernard Nietschmann, *The Unknown War: The Miskito Nation, Nicaragua, and the United States* (New York: Freedom House, 1989); Bernard Nietschmann, "The Miskito Nation and the Geopolitics of Self-Determination," *Journal of Political Science* 19:1 (1991): 18-40.
61. Nietschmann's staunch defense of Miskito rights to traditional lands and marine territories after the Sandinista electoral defeat in 1990 has won praise from those who opposed his views during the 1980s; see Nietschmann, "Conservación, Autodeterminación Y El Area Protegida Costa Miskita, Nicaragua," *Mesoamérica* 29 (1995): 1-55, and Nietschmann, "Protecting In-

- digenous Coral Reefs and Sea Territories, Miskito Coast, RAAN, Nicaragua,” in Stevens, ed., *Conservation through Cultural Survival*, 193-224.
62. Offen, “The Sambo and Tawira Miskitu,” 319-72; Karl H. Offen, “The Miskitu Kingdom. Landscape and the Emergence of a Miskitu Ethnic Identity, Northeastern Nicaragua and Honduras, 1600-1800,” (Ph.D. diss., University of Texas, Austin, 1999).
 63. For Kay B. Warren and others, a “move away from [viewing] cultures as bounded entities and fixed authenticities toward a focus on culture makers—who draw on a range of culture forms to make new claims on memory and history—[helps] anthropologists widen their understandings of contemporary ethnicity and cultural resurgence,” and this is tied to an analysis of “strategic essentialism;” Warren, *Indigenous Movements and Their Critics: Pan-Maya Activism in Guatemala* (Princeton: Princeton University Press, 1998): 27, 29.
 64. Offen, “Narrating Place and Identity,” 382-92.
 65. Offen, “Mapping Indigenous Rights,” n.p.